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As confirmed by two case studies of pilot IPI programs conducted September through December, 1967 in two elementary schools in New Jersey, participation in the innovation of Individually Prescribed Instruction requires a certain level of commitment by school district administrators, principals, and teachers. One of the pilot schools was graded conventionally; the other was nongraded. Problems included training procedures, motivation of staff, communication, administrative cooperation, and teacher participation. Five criteria were established for selecting schools for participation in IPI: (1) Administrative commitment, (2) teacher commitment, (3) participation in research, (4) retraining of administrators and teachers, and (5) uniqueness of situation. The study concluded that retraining of administrators was especially needed in the areas of organization, communication, and the analysis of IPI data. (JK)

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THE USE OF DATA IN SCHOOL SELECTION AND TRAINING OF ADMINISTRATORS AND TEACHERS

by

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INTRODUCTION

Since June 1966, Research for Better Schools, Inc. (RBS) a Regional Educational Laboratory, has been cooperating with the Learning Research and Development Center of the University of Pittsburgh in the field development, field testing and dissemination of Individually Prescribed Instruction. One of the first steps achieved by RBS was the establishment of five demonstration schools in different socio-economic settings, so that educators would have a chance to see the IPI program in action first hand. During the past several years, these demonstration schools have hosted approximately 7,000 visitors from all over America who became interested and excited about IPI. Because of this enthusiasm, thousands of schools have contacted RBS about the possibility of becoming involved with this project. To help meet this need, and to continue the research on a controlled basis, a general strategy for diffusion has been developed and is now being tested. This strategy includes the developing of specific criteria for selection to insure commitment and understanding about IPI as an instructional system; developing administrative training programs so that the principal can successfully assume a new role, and developing retraining programs for teachers using the principles of IPI.

BACKGROUND

After the completion of two Summer Institutes, used for training teachers and administrators, the decision was made to prepare training materials that could aid in individualizing the retraining of teachers. Since then, RBS has concentrated its efforts in teacher education on

developing a teacher training program that will (1) enable the school to conduct its own training program; (2) enable the teachers to conceptualize a model of individualized instruction as a basis for instructional decision making in IPI; and (3) enable the teachers to plan and conduct IPI in their classroom.

The training program has been constructed upon the model of Individually Prescribed Instruction and contains five specific packages, each consisting of behavioral objectives, pre- and post-tests of the objectives, self-instructional materials and equipment and recommended learning settings. Each package provides four types of activities. They include concept-building related to individualized instruction; analysis and application of the concepts to IPI; practice in using IPI skills and materials as routine exercises; working through the Math Continuum and assuming the role of teacher, aide, and student as needed; and discussion designed to provide opportunity for clarification and expression of reactions, to develop and use skills for planning sessions to cover suggested topics, questions or case studies. The five packages of training materials are concerned with (1) The Theory of Individualization and the Present IPI Mathematics Program, (2) The Theory of Behavioral Objectives and the IPI Mathematics Program, (3) Diagnosis of Learning, (4) Prescription Writing and (5) Planning for Individualized Instruction including analysis of data. The selection of these areas was based on past experience of needs of teachers to retrain them for Individually Prescribed Instruction.

The five packages that have been prepared for the retraining of teachers have several general principles under which they operate. The

first one is the development of the specific packages of material to permit the individualization of the training program for teachers so we can, for once in our lives, practice what we preach. Secondly, the materials have been developed in such a way that they can be carried by the U.S. mail and that, hopefully, with some help, administrators can lead their faculties through these particular packages. Also, it was very important to introduce each of the packages with a theoretical base and move from that theory to its specific application in the IPI program. However, during the first field testing of packages, the teachers resisted this latter approach. They appeared more concerned about the here and now, the practical application of IPI and how it affects them. Therefore, the later packages have had to blend more closely the theory and the practice. Said in another way, RBS' initial thinking was to build all of the packages with some foundation, some basis in theory, and then move this to the specifics that are involved in the IPI math program. At this point, some of this thinking has changed, because of the needs and the demands of the teachers.

The training program was given a preliminary field test during the months of October, November and December in two New Jersey schools that were preparing to install IPI in January. Revisions and refinement of the program have taken place. A second testing took place during the summer of 1968 in 72 schools.

FIRST FIELD TESTING

Field testing of the first version of the self-instructional materials took place in October, November, and December 1967, in two

communities in New Jersey. Much more was learned from this testing than the strength and weakness of the materials. Different stages of readiness for innovations as well as administrative and teacher commitment became apparent.

The following is a descriptive account of the experience with the teachers in the two elementary schools using the IPI in-service teacher training materials. Much of the data is documented through interviews, forms and correspondence. The two schools are described separately.

CASE STUDY 1 - (SCHOOL A)

Community and School Environment

The city is outside of New York City. It has a population of 47,000, covering a wide range of socio-economic conditions. The school sits on top of a hill in a residential area. The building is in excellent condition and the classrooms are large with ample lighting. In the school there is a large population of students from upper middle class homes (83%). The other 17% of the students are from lower middle class environments and they make up most of the school's Negro population. For the past two years the school has been ungraded. The children are grouped by age and assessed level of maturity. They have dispensed with traditional reporting forms and instead have substituted two conferences a year with all parents, and a narrative report of student progress. The classes range in size from 20-27 pupils in each, and there are nine classes in all. The median I.Q. of the students is approximately 118.

Introduction and Planning

Two consultants, one from N. Y. U. and the other from the Kettering Foundation, were called in by the School Board to report on innovations in the country. They both spoke of IPI. With a Ford Foundation Grant, two principals and three teachers visited McAnnulty, the IPI demonstration school in Pittsburgh. The Principal of School A heard about the program informally from the people who had visited McAnnulty. He also received an IPI brochure from the school district's central office. The Principal went to the Assistant Superintendent, who is the Director of Instruction, and secured funds in order to visit Research for Better Schools and meet with one of the project's Research Assistants and the Public Information Director. The Principal reported back to the Assistant Superintendent. He then wrote and arranged a meeting for RBS, the Assistant Superintendent, the Curriculum Director for Math and Science, one of the science staff people, and himself. At that meeting, beginning arrangements for the training were made. A quote from a letter dated August 14, 1967, from the Assistant Superintendent, confirms the agreement:

> There is no doubt about our commitment, and I believe we have the necessary resources to start a firm pilot program. I am certainly most interested in testing out your teacher training materials because so much of the success of a program of this kind rests on that element of the program.

In an interview held on December 11, 1967, the Assistant Superintendent stated a somewhat different viewpoint:

> I was made aware of our commitments, but the requirements were too general. I only had a vague impression of the cost. This was not settled until the middle of the year.

The Assistant Superintendent gave much of the initial planning responsibility to the Principal. The Principal, in an interview on December 19, 1967, stated that he was satisfied at the meeting with RBS, but would have liked to have had the requirements in writing.

It is difficult to be certain as to exactly how and to what extent the teaching staff was involved in the planning. The Assistant Superintendent spoke of a meeting in which RBS staff presented the program to the local district and got their reaction before the commitments were made. There is no record of this meeting; neither the Principal nor the teachers spoke of it when asked about the staff's introduction. The Principal stated that he introduced the program at a faculty meeting late the previous spring. He gave out IPI brochures and they looked at the Mathematics Continuum. The three teachers interviewed all stated that they felt they had been consulted in the decision, but that they were given little information on which to base their consent. They spoke of a faculty meeting late in the spring during which the Principal spoke of IPI.

RBS formally introduced the training program on September 19, 1967. The director of the project, the developer of the training materials, and the trainer representing RBS were present at the meeting. There was a meeting with the Principal before the session with the teachers in which he expressed his enthusiasm and that of his staff. At the meeting, he introduced the RBS personnel and spoke of the staff's excitement about the

program. A short formal presentation was given by each of the RBS representatives. Included was an introduction to RBS and what it does, an introduction to IPI and previous training efforts, and an introduction to the teacher training program. The main goal was to share information with the teachers and allow them to ask questions, so as to feel part of the program. A film was shown and then questions were asked. Each question was answered and the meeting ended with a statement for the group by the Principal.

September Through December Training Period

From the teachers interviewed, and from the weekly evaluations, there was a great deal of criticism of the material. Much of the discomfort was related to the difficulty in the beginning session of learning the vocabulary and reading the theoretical material. The teachers demanded specific experience and found it difficult to concentrate on the paper and pencil activities. They expressed the need to begin working with students and worked harder during the sessions when the children were present. After their visitation to a demonstration school, they felt more positive about the program. This opened the way to discussions of how they would improve on the program in their own situation. They were disturbed by the quiet atmosphere in the demonstration school and thought that their classes would be difficult. The rigidity of the schedule necessary to organize the program seemed to concern them and they also spoke of wanting to increase pupil-pupil interaction.

One administrative reaction caused some friction in the class. He

did not understand the school's role in terms of the evaluation of the training materials. He was dissatisfied with the training materials and felt they were undermining the staff's morale. There were some problems of communication involved here. The trainer was not aware of who the administrator was and that he and his staff were to be included in the sessions. At the first session, five extra people were present and there were not enough materials. During subsequent sessions, the administrator often interrupted and asked the trainer to defend the rationale of the materials. On two occasions he walked out of the sessions. He and his staff did not attend any of the other sessions after he argued with the trainer about the difficulty of the materials. The administrator felt that only if they could be involved in the development of the materials, could they take part in the program. Since this was not possible, his staff totally withdrew from the sessions.

The Principal is youthful and energetic. The Assistant Superintendent stated in an interview that it was this enthusiasm that got the program started in the city. He was very positive before the sessions began, however, he had similar reactions to the beginning materials as did the teachers. He wrote in his first evaluation:

> In my opinion, the instructional technique should have become varied. It became boring to keep working on "programmed material" without change. I found the terminology oppressive.

At later sessions he expressed approval of the materials, yet he spent less and less time in the sessions. He said he needed this time to organize

materials. By the end of the sessions, all the materials were organized -- an aide had been hired. He was in the process of preparing a schedule. During the last interview, he stated that he had been bothered by one thing in particular. He said:

> I have to tell you that I am offended. I resent being told what my job is. You can't specify a principal's job. The principal is a generalist, not a specialist. I resent special rules for the principal. He should be the one who gets the program and carries it out in his own way.

In School A the role of the trainer consisted mainly of asking and answering questions about the material, establishing a variety of instruction settings, i.e. small group work, independent work, and changing of teacher's roles as they were working with children. There were often demands after one of the packages had been presented by the Principal, and he, as well as the teachers, requested instruction. The group was small -- nine teachers and the Principal -- and this enabled the trainer to give constant feedback to them all. There was a dependence on the trainer for answering questions (which were already answered in the material), and it was found that as the sessions progressed, it became necessary not to answer these questions but to refer the person asking information back to the materials. The more this was done, the fewer questions of this kind were asked.

Present and Future IPI

The school had begun Placement Testing before the sessions were ended, so the program had begun. The teachers were expressing concern and annoyance with the Principal because they had no schedule and were not

assigned an aide.

The Assistant Superintendent stated how he sees the school system working with IPI in the future:

> In _____, we plan to add to the pencil and paper of IPI by developing other materials and manipulative devices. We are using the science people for this. IPI is only one of several ways that ____ is experimenting with individualized instruction.

CASE STUDY 2 - (SCHOOL B)

Community and School Environment

The city is within a few miles of New York City. It has a population of 46,791, covering a range of socio-economic conditions from upper middle class to lower class. The school is located one block off the main avenue. It is an old building with a newer extension built on. The population of this part of the city is relatively mobile with a large number of Negro families moving into the area. Most of the families are part of the blue collar working class and the student population is equally integrated. In 1964 the enrollment was frozen and children moving into this school's district were to be assigned to other schools.

The children are grouped by grade level and a traditional reporting form is used. The number of students in a classroom averages 20 and there are 22 classes in all. The median I. Q. of the students is approximately 105.

Introduction and Planning

The Superintendent of Schools heard an RBS and an LRDC staff member discuss IPI about a year ago at a Borad of Education Meeting at Paterson State College. He then sent the Curriculum Director to Pittsburgh to see the demonstration school. The Superintendent kept in contact with RBS and visited one of RBS's pilot schools. It was during that visit that most of the specifications for the training were established. The Superintendent carried out all of the initial

planning on his own. In a letter on June 20, 1967, the Superintendent stated his choice of school and said of the school:

> From a socio-economic approach, the school is the lowest of the eight _____ elementary schools. We do, however, have one of our finest staffs in this school and good leadership.

According to the Superintendent, the Principal was involved in the program early in September and was involved in the plan as it would effect his school. The Principal in our last interview stated the following:

> I was informed of the decision in late September. I received no information and the specifications of my responsibilities were not spelled out.

Everyone agreed that the teachers were not involved in the planning. The Superintendent spoke of a formal meeting soon after the first day of school in which he told the staff about the program but their first formal introduction to the program was late in September when three RBS people visited the school.

On September 25, 1967, the training program was introduced by RBS. There was a luncheon followed by an administrative meeting including the Superintendent, the Curriculum Director, the principal and other central staff members. The program was outlined and the specific arrangements for the sessions were made clear. Following this was a meeting with the teachers. The Superintendent gave an introduction to the program and spoke about why he felt this staff was the best one for the job. He promised each teacher participating

three points of salary credit.

A reaction to this presentation was expressed during an interview with one of the teachers. She said:

> I was not snowed in September by the Superintendent telling us that we were a hand-picked staff. I think we would have felt different about the program if we had a different kind of presentation. I think we felt resentful because of the presentation we received. I think we needed some help in getting excited about the program and getting involved in it.

Brief presentations were given and an IPI film shown. An attempt was made to generate questions rather than answer them. The teachers were asked to write down some of their questions with the promise that we would attempt to answer them throughout the training. There were some concerns voiced by almost all the teachers. They included:

1. Time
   a. Scheduling; when, how long for math
   b. Amount of time necessary to get to each child, to practice, to plan
2. Cost
3. Availability of materials and aides
4. How to motivate students towards independence
5. Teacher role (when do I teach?)

<u>September Through December Training Period</u>

Some unique events occurring in the school district and to this school

in particular, greatly effected the training. There were many rumors concerning a change in the school as of next September. It had been proposed that the school be made into a city-wide kindergarten. This would mean that the staff would be disbanded and sent to other schools. There had been no confirmation of this and the Superintendent issued the statement about this possibility in December. The teachers and the Principal, however, had been aware of the possibility since the training began. In addition, during the time the training was going on, the Superintendent announced his resignation. The implications of these two events for IPI and the staff itself had not been discussed by the central administration with the teachers or the Principal. In an interview with the Superintendent, he was asked how he thought these events might be effecting the staff. He said:

> I don't really see any problems for the teachers. I did send them a letter telling them that when the policy is firm they will be informed. It is the principal's job to allay these fears. It is his responsibility but because he's uncertain, he is increasing their anxieties. The teachers will be given first choice as to what school they will go to. I would like to use them in training other teachers.

The Superintendent came back to this point several times during the interview. He expressed concern about the teacher's morale and said that he had received no feedback from the staff, but he could see that perhaps this could be upsetting for them. He said he was in a bind and unable to tell them anything until the Board made a decision.

The teachers had similar reactions to the training materials as did the teachers in School A. The general feeling was that of discontent. After they visited a demonstration school they felt certain that they could never make the program work as well as they saw it in operation there. They based much of this concern on the fact that they didn't have aides and there were no definite plans of how they would be hired. This reaction was very different from School A.

The question of teacher aides was one other ingredient that increased the staff's tension. The Superintendent agreed that aides were necessary if IPI was to operate. He gave the responsibility of getting aides to the Principal. He claimed that there were no funds available for aides and that volunteers would have to be gotten. The Prinicpal in turn shared this problem with the teachers and throughout the training session no arrangements for aides were finalized.

In addition to all the other problems, three of the teachers were pregnant and leaving shortly. They took part in the sessions, however, and their attitudes affected the group.

There were leadership difficulties working at the same time. During the first two or three sessions the Curriculum Director was the group leader while the Principal assumed the role of group member. The Superintnedent was called and questioned about this. He held a meeting and informed the Principal of his responsibilities and gave him the job of group leader. During one of the sessions following the meeting between the Superintendent, Curriculum Director and

Principal, the Superintendent questioned whether the Principal could handle the job. In the last interview he again referred to some of the problems the Principal has as an administrator.

The Principal, during the training, seemed confused and unsure of himself. He worked hard on the packages and quickly organized materials. During conversations he often mentioned his lack of initial involvement in the program and a growing uneasiness that the responsibility had suddenly been placed on his shoulders without any previous information. He found it very difficult to get aides. He was confused by the material in the packages and expressed the need to move slowly into the program. He said all this in an interview:

> My greatest problem is that I have no money for aides and not enough support now that the training is over. The speed with which we operate depends on community help. I have to put the show on the road - and it all rests on my shoulders now. What I needed to know earlier was the mechanics so I could have gotten the process in motion. A theoretical emphasis in the beginning of the training program led to impatience. I wanted to get my hands into the program. I think it is important that we move slowly and not involve all the children at one time. I think it is most important to have everything all spelled out.

The role of trainer was different in School B than that in School A. Due to an increase in participants, the trainer often got bogged down with papers to grade and materials to distribute. Each week an attempt was made to explain the sequence of the materials to the teachers. The intention was to get them to take responsibility

getting their own materials. They did not do this but kept coming to the trainer. Many of the teachers would not work on the packages at all unless they were constantly prodded. A great deal of reinforcing and enforcing of a structure on the sessions was necessary or there would be little accomplished. One interesting side note which speaks well for the materials is that two teachers worked on the first three packages completely on their own. They were both new to the school and would not begin teaching until January. They were highly motivated and completed the packages at home. They caught up to the class as well as surpassing many of the teachers. It was helpful if at the end of the sessions the group came together and expressed some of the feelings they were experiencing. The more they did this the closer they seemed to feel as a staff and this lessened some of the tensions caused by the situations already described.

Present and Future IPI

The Principal told the teachers to begin placement testing with a few children at a time. The aide problem is still unsolved, although a verbal commitment was gotten from the Superintendent by the trainer that at least one full-time paid aide would be hired. The Principal plans to go ahead very slowly rather than beginning the program for the whole school.

The Superintendent thinks that as of January 8, 1968, the originally planned starting date, IPI will be in full motion. If there is a change next year he has already thought about the school to which the program will be transferred. He said that he would not be satisfied until IPI was in operation in all the schools throughout the district.

SUMMARY OF CASE STUDIES

Different school systems are at different points in terms of a readiness for innovation. The climate of the school district itself must be somehow measured. It seems that unless a school district has already been experimenting with innovation up until they come in contact with IPI they will not be ready for it. Once criteria have been established as to which school districts are eligible, the way in which they begin to implement the program must be spelled out. In both schools discussed, there was a definite lack of knowledge of the system and its implications for those responsible for carrying it out. The enthusiasm of the Principal in School A only could carry him so far and in the end he was stymied by the same obstacles as the Principal in School B. The principals must be involved in the planning of the program, understand the workings of the program, and be trained in the skills necessary to carry it out.

The teachers must have some choice in the decision to have the program. Their decision must be based on some knowledge of what thechange will mean for them as teachers and not on their acquiescence to the will of the authority figures in the school system.

It is the responsibility of RBS not just to establish criteria on which to choose schools but to see that the commitments that are made are carried out with some measure of honesty and depth. Just saying yes, should not be acceptable as a measure of commitment. An outlined plan of how each staff member is to be involved should be written down by the person responsible for informing the staff. It

is essential to define the responsibilities of the Superintendent working with the Principal and the Principal working with the teachers in the program.

Based on the experiences in the two schools described, training materials were rewritten. Furthermore, a general strategy was developed for involvement of schools in Individually Prescribed Instruction.

CRITERIA FOR SELECTION

As a result of the field testing of retraining material, criteria were developed for the selection of IPI schools. These criteria are to insure commitment and understanding about IPI as an instructional system. The following criteria are part of an application used in selecting schools for participation in IPI.

The specific criteria that were established are as follows:

(a) Administrative commitment. This means a self-study of IPI on the part of the local administrator. Firsthand knowledge about the essential elements of IPI and an understanding of some of the financial implications involved are the main objectives. When this study is completed, the administration must be able to say that it can support IPI not only in philosophy and operation, but financially as well.

(b) Teacher commitment. Teachers of any given school have the same right as the administration to investigate a new instructional system that is to be used in their school. Therefore, the faculty, or at least faculty representation must be given the opportunity to visit an IPI demonstration school and talk to other teachers in this instructional system. The teachers also must be involved in the basic decision as to whether their school should become an IPI situation.

(c) Participation in research. Both the teachers and the administrators must know quite clearly the research questions that are being asked, the kinds of data that are being collected, and the need for this information if IPI is to succeed.

(d) Retraining of administrators and teachers. Both the administrator and the teachers of any particular school must know the need for a new role in using IPI. This understanding must include the knowledge about training and the time needed for such training.

(e) Uniqueness of situation. RBS, in using this criterion, is trying to take into consideration the past history of any given school in terms of its interest and efforts to promote individualization.

RETRAINING OF ADMINSTRATORS

The second phase of the strategy for controlled expansion of IPI involves the retraining of administrators.

Two years of experience in different kinds of schools leads one to conclude that with the new role in IPI for administrators, new skills are also needed. Therefore, specific administrative training programs have been offered to help the principal successfully implement this change. It is our experience that the principals of the elementary schools need help in three basic aspects of dealing with IPI.

The first aspect is with the problems of organization. Most elementary principals are not familiar with the need for developing flexible scheduling in order to provide children with both professional and nonprofessional services when they need them. It is also our experience that schools need help in terms of deciding upon the amount of materials needed in order to make the program work.

The second problem is that of communication. Since IPI depends on the administrator of the school to be the instructional leader, to have the ability to meet with his staff, and to help his teachers refine the system and solve problems, communication skills are a necessity. A principal must know how to talk to his staff, receive information from it, get the staff involved in the decision making, and proceed with the refinement of the program. One other element of the role of the principal is to lead the continuous training of teachers

in individualization.

Analysis of data is another critical area in retraining. Since a prescription technique is used in IPI, much information is available to the principal in two dimensions. The prescription can be looked at in terms of the progress that any youngster is making in a school subject where IPI is involved. However, the principal also has new information about the prescription techniques of his teachers. The principal needs new skills in looking at this flow of information that is passing over his desk concerning both the teachers and the students in his school. Knowing what to look for in this wealth of data, and how to analyze it in terms of refining the project becomes critical. The administrative training programs thus have the following objectives in order to cope with the above deficiencies in the conventional principal's role.

- To learn the operation and procedures of IPI.
- To develop strategies for training teachers for IPI.
- To work with the IPI materials.
- To learn the administrative tasks involved in implementing IPI.
- To develop communication skills useful in IPI.
- To formulate an implementation plan for the operation of IPI in each individual school.

Sixty adminstrators participated in the Administrative Training Program. Two evaluation instruments were administered during the training sessions. Listed below are both questionnaire and the percent of response.

QUESTIONNAIRE I

Administrative Training Program

(1) Before coming to Philadelphia I had read

1	2	3	4	5	
-14%	-23%	-16%	-11%	-14%	
All of the teacher training materials			None of the teacher training materials		

(2) I found the teacher training materials

	1	2	3	4	5	
(a)	-20	-41	-18	-5		-9
	Easy to understand			Difficult to understand		

	1	2	3	4	5	
(b)	-30	-25	-20	-0		-0
	Very interesting			Very boring		

	1	2	3	4	5	
(c)	-48	-30	-9	-0	-2	
	Informative			Not Informative		

(3) During the discussion of the teaching traiing materials in Philadelphia

	1	2	3	4	5	
(a)	-9	-16	-39	-14	-2	
	All of my questions were answered			None of my questions were answered		

(b)

1	2	3	4	5	
-16	-20	-30	-9		-0
Much additional information was presented			No additional information was presented		

(4) As a result of the session on prescription analysis, I feel I can analyze prescriptions.

1	2	3	4	5	
-9	-39	-39	-4		-0
Very well			Not at all		

(5) I think learning to analyze prescriptions will be

1	2	3	4	5	
-66	-0	-0	-0		-0
Valuable to me			Not valuable to me		

(6) As a result of the afternoon session on communication skills I

1	2	3	4	5	
-18	-20	-11	-9		-5
Learned a great deal			Learned nothing		

(7) The session on communication skills will be

1	2	3	4	5	
-32	-11	-11	-9		-2
Valuable to me			Not Valuable to me		

(8) The orientation before actually moving into the school setting was

1	2	3	4	5	
-45	-23	-14	-0		-0
Sufficient			Insufficient		

(9) Before entering the school setting I felt I could teach in an IPI classroom

1		2		3		4		5
	-2		-23		-14		-27	-18
Very well								Not at all

(10) Before entering the school setting I felt I could function as an IPI Administrator

1		2		3		4		5
	-2		-9		-27		-25	-18
Very well								Not at all

(11) I found the seminar on aides

1		2		3		4		5
	-39		-23				-5	-0
Very informative								Not informative

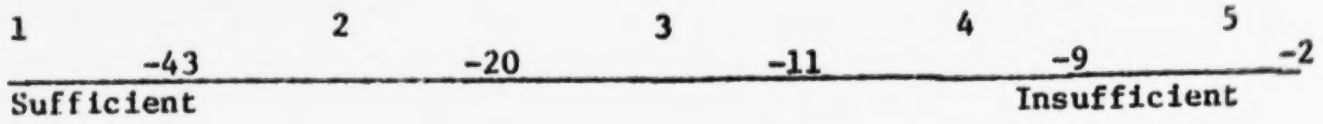
(12) During this first week, I felt that the activities that the RBS staff planned were

1		2		3		4		5
	-36		-25		-18		-9	-0
Based on my needs								Not based on my needs

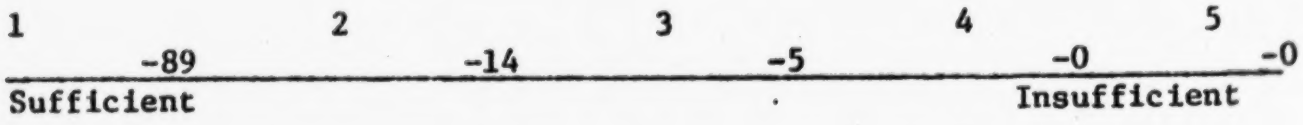
(13) During the discussion periods, I felt

1		2		3		4		5
	-66		-14		-0		-0	-0
Completely free to express myself								Not free to express myself

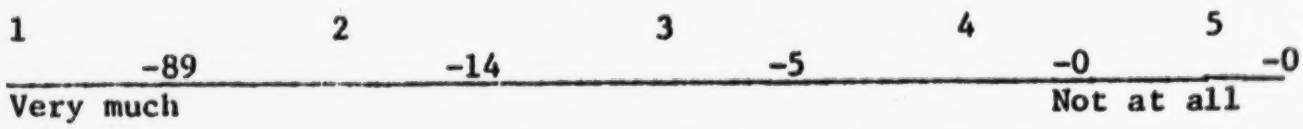
(14) The amount of time provided for interaction with school personnel was



(15) The amount of time provided for interaction with RBS staff was



(16) Based on what happened this week, I am looking forward to next week's experience



Please check yes or no adjacent to each activity.

(17) During the past week I had an opportunity to

	Yes	No
(a) Shadow a teacher	70	11
(b) Teach in an IPI class	43	39
(c) Observe an aide	84	0
(d) Perform aide duties	75	9
(e) Shadow the principal	23	39
(f) Shadow the person responsible for coordinating the IPI program.	27	59
(g) Observe planning session	43	61
(h) Participate in planning session	39	48
(i) Cooperate in leading planning session	5	77

(18) Please rank the items to which you responded yes in #17 according to their value to you as a prospective IPI principal by placing a #1 adjacent to the most valuable, #2 adjacent to the next most valuable, etc.

(a) Shadow a teacher	39%
(b) Teach in an IPI class	52%
(c) Observe an aide	100%
(d) Perform aide duties	95%
(e) Shadow the principal	23%
(f) Shadow the person responsible for coordinating the IPI program	43%
(g) Observe planning session	53%
(h) Participate in planning session	48%
(i) Cooperate in leading planning session	16%

(19) Of the items in #17 to which you responded no, check the experiences you would like planned for next week

(a)	Shadow a teacher	14
(b)	Teach in an IPI class	50
(c)	Observe an aide	5
(d)	Perform aide duties	36
(e)	Shadow the principal	61
(f)	Shadow the person responsible for coordinating the IPI program	48
(g)	Observe planning session	43
(h)	Participate in planning session	64
(i)	Cooperate in leading planning session	61

QUESTIONNAIRE II

ADMINISTRATIVE TRAINING PROGRAM

Please respond to the following statements by circling the number on the line that best represents your reaction to each statement.

(1) The activities planned for me in Internship II seemed to reflect the needs I expressed in Internship I

1	2	3	4	5
-30	-32	-18	-7	-2
Very much			Not at all	

(2) The introduction to the "Implementation Plans" was

1	2	3	4	5
-39	-30	-7	-14	-0
Sufficient for me to begin planning			Not sufficient for me to begin planning	

(3) The amount of time provided to work on the implementation outline was

1	2	3	4	5
-57	-20	-7	-14	-0
Sufficient			Insufficient	

(4) The completed implementation plans will be

1	2	3	4	5
-70	-27	-3	-0	-0
Helpful in setting up IPI			Not helpful in setting up IPI	

(5) The seminar on pupil progress was

1	2	3	4	5
-41	-25	-9	-5	-0
Very informative			Not informative	

(6) I was able to get answers to my questions about any aspect of the Internship program

1	2	3	4	5
-70	-27	-3		
All the time				None of the time

(7) During the discussion periods I felt

1	2	3	4	5
-70	-27	-3		
Completely free to express myself				Not free to express myself

In questions 8 and 9, please check yes or no adjacent to each activity

(8) During Internship II I had an opportunity to

		Yes	No
(a)	Shadow a teacher	89	2
(b)	Teach in an IPI class	68	20
(c)	Observe an aide	68	2
(d)	Perform aide duties	68	0
(e)	Shadow the principal	27	57
(f)	Shadow the person responsible for coordinating the IPI program	57	39
(g)	Observe planning session	73	20
(h)	Participate in planning session	57	39
(i)	Cooperate in leading planning session	14	68

(9) Do you think, as an IPI administrator, you should be able to

(a)	Teach an IPI class	75	2
(b)	Organize and conduct planning sessions	77	0
(c)	Analyze prescriptions and give feedback to teachers	75	0
(d)	Prepare teachers to teach in IPI	77	0

		Yes	No
(e)	Conduct continuous training of teachers in IPI	73	0
(f)	Select and train aides	73	2
(g)	Cooperate with RBS in research effort	75	2
(h)	Order and supervise the organization of materials	68	2

(10) Please place a check adjacent to the activities you have not experienced during Internship I or Internship II that you consider critical in preparing you to administer IPI in your school.

(a)	Shadow a teacher	0
(b)	Teach in an IPI class	7
(c)	Observe an aide	18
(d)	Perform aide duties	0
(e)	Shadow the principal	0
(f)	Shadow the person responsible for coordinating the IPI program	9
(g)	Observe planning session	14
(h)	Participate in planning session	18
(i)	Cooperate in leading planning session	36

SECOND FIELD TESTING (RE-TRAINING MATERIAL FOR TEACHERS)

Development of retraining programs for teachers using the principles of IPI were first tested in two schools in New Jersey (described in Case Studies). The data collected permitted major revision of these materials. The outline below is for the training materials revised.

VOLUME I

Section I; AN OVERVIEW OF INDIVIDUALIZED INSTRUCTION AND IPI

- A. History of Individualization
- B. Overview of Individualized Instruction
- C. How Instruction is Indivdiualized
- D. Overview of IPI
- E. How Instruction is Individualized in IPI

Section II: BEHAVIORAL OBJECTIVES AND THE IPI CONTINUUM

- A. Behavioral objectives and the Specific Objectives in IPI Mathematics
- B. Organization of the IPI Mathematics Continuum

VOLUME II

Section III: DIAGNOSIS OF STUDENT ACHIEVEMENT

- A. Introduction
- B. IPI PLacement Tests
- C. IPI Pre-tests
- D. IPI Post-tests
- E. IPI Curriculum Embedded Tests

VOLUME III

Section IV: DEVELOPING A PRESCRIPTION

Part 1
- A. Introduction
- B. Guidelines for Instructional Decisions in Developing a Prescription

Part 2
- A. Simulated Case Studies
  1. Joe Bowen : C-Frac.
  2. Susan Markham: D-Mult.
  3. Sandy Owens : B-Num.

4. Ralph Stoney : F-Div.
5. John Tanes : C-COP
6. Eileen O'Brien: E-Num.

VOLUME IV

Section IV: DEVELOPING A PRESCRIPTION (Part 2 continued)

A. Simulated Case Studies

VOLUME V

Section IV: DEVELOPING A PRESCRIPTION (Part 2 continued)

A. Simulated Case Studies

Section V: PLANNING SESSIONS

These materials were tested in 70 schools during the summer of 1968. The Administrators were responsible for training their staff. RBS provided consultant help in these training programs. The following questionnaire was completed by the teachers.

PART I

In this part you are asked to describe how you worked through the materials, Teaching in IPI, in your workshop or training sessions.

SELECT THE PHRASE WITH WHICH YOU AGREE MOST CLOSELY:

1. The orientation I received prior to using Teaching in IPI:

160 a. Gave a complete overview of the content, organization, and use of the materials.

100 b. Briefly introduced the content, organization, and use of the materials.

5 c. Did not give any information about the materials.

5 d. Other (specify) _____

_____

_____

2. We worked: (Select no more than the TWO most frequently used.)

215 a. In small groups of 4-6 persons

160 b. As a whole group

90 c. Individually

35 d. Other (specify)_____

3. The rate at which we covered the material was: (Select one.)

95 a. The same for everyone

115 b. Different for each small group

105 c. Individually paced

30 d. Other (specify) _____

4. I worked through:

205 a. Every section

70 B. Only certain sections (specify sections and pages)

_____

5. I covered the materials:

260 a. In the sequence as printed

15 b. In the following order (specify):

_____

COMPLETE:

6. The total number of workshop or training session hours I spent mastering these materials was:

17	persons	- 1-25 hrs.
118	persons	- 26-50 hrs.
0	persons	- 51-75 hrs.
1	person	- 76-100 hrs.

7. The total of hours I worked on these materials outside of the workshop or training session was:

191	persons	- 1-10 hrs.
36	persons	- 11-20 hrs.
17	persons	- 21-30 hrs.
3	persons	- 31-40 hrs.
3	persons	- 41-50 hrs.
10	persons	- 51-60 hrs.

8. Of the total amount of time spent working in these materials, I estimate that:

Section I: An Overview of Individualized Instruction and IPI took:

252	persons	- 1-30 hrs.
9	persons	- 30-60 hrs.

Section II: Behavioral Objectives and the IPI Continuum took:

107	persons	- 1-15 hrs.
146	persons	- 16-30 hrs.
9	persons	- 31-45 hrs.
0	persons	- 46-60 hrs.
2	persons	- 61-75 hrs.

Section III: Diagnosis of Student Achievement took:

25	persons	- 1-10 hrs.
107	persons	- 11-20 hrs.
81	persons	- 21-30 hrs.
55	persons	- 31-40 hrs.
4	persons	- 41-50 hrs.

Section IV: Developing a Prescription took:

44	persons	- 1-15 hrs.
161	persons	- 16-30 hrs.
44	persons	- 31-45 hrs.
22	persons	- 46-60 hrs.

Section V: Planning Sessions took:

157 persons - 1-10 hrs.
79 persons - 11-20 hrs.
33 persons - 21-30 hrs.
0 persons - 31-40 hrs.
1 person - 41-50 hrs.

9. I spent _____ total hours actually teaching children IPI Math.

59 persons - 1-10 hrs.
24 persons - 11-20 hrs.
5 persons - 21-30 hrs.

10. I spent _____ total hours in planning sessions with other teachers.

121 persons - 1-10 hrs.
28 persons - 11-20 hrs.
6 persons - 21-30 hrs.
6 persons - 31-40 hrs.
1 person - 41-50 hrs.
1 person - 51-60 hrs.

11. I spent _____ total hours writing prescriptions.

123 persons - 1-10 hrs.
24 persons - 11-20 hrs.
10 persons - 21-30 hrs.
1 person - 31-40 hrs.
4 persons - 41-50 hrs.

12. Was this training program run in a way that was individualized for you?

225 - yes
25 - no

13. If you were responsible for preparing a group of teachers (similar to yours) to teach in IPI, how would you run the program?

PLEASE ANSWER THE QUESTIONS BY SELECTING ONE OF THE FOLLOWING RATINGS:

1- NEVER 2- RARELY 3- SOMETIMES 4- MOST OF THE TIME 5- ALL OF THE TIME

ENTER THE NUMBER YOU HAVE SELECTED IN THE BLANK TO THE LEFT OF THE QUESTIONS.

	1	2	3	4	5
1. Were the explanations useful?	0	2	36	170	88
2. Were the exercises useful?	40	86	70	44	30
3. Were the Pre- and Post-Tests useful?	0	2	56	128	110
4. Were the charts and diagrams useful?	0	2	56	120	110
5. Were the case studies useful?	0	14	68	130	92
6. Was working through the continuum yourself useful?	0	0	18	58	104
7. Was working with a group of children useful?	0	2	18	46	36

8. Other (Specify)

COMPLETE

9. Which sections were most valuable?

10. Which section(s) or part(s) of a section could be eliminated? (Specify by section and page.)

CONCLUSION

Selection of schools to participate in the innovation of Individually Prescribed Instruction requires a certain level of commitment. Furthermore, schools need to understand very clearly the nature of their involvement. Communication must be precise.

After several years of experience with schools using the instructional system IPI, it became obvious that the level of commitment had to be structured. The case studies presented depicted rather clearly this problem. The criteria established have tended to reduce this problem and optimize the chances for success.

Administrative training is considered the number one problem in introducing this innovation. The changing role of the administrator and his responsibility for the initial training and continuous training of staff needs specific training programs. Most administrators have welcomed the training help to permit them to provide new leadership within their school.

Retraining of teachers through the use of special materials based on the principals of Individually Prescribed Instruction has permitted the individualization of teacher training programs. Furthermore, real cost reductions have been realized.

The general strategy from application to implementation, including prior commitment, retraining of administrators and teachers appears to hold much promise. Further refinements of the general diffusion strategy are now being pursued.